

FOOD PLANTS OF THE INDIANS OF THE GUATEMALAN HIGHLANDS

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FOUR HUNDRED and twenty-five years ago Pedro de Alvarado led a little band of Spanish soldiers and a host of Mexican mercenaries out of Mexico across the Río Suchiate into Guatemala. When they reached the highlands of Quezaltenango, they entered a densely inhabited region that extended all the way across the mountains (Los Altos) as far as the present site of Guatemala City. The density of the population is attested by contemporary writers like Bernal Díaz de Castillo, by extensive ruins of such magnificently located cities as Uatatlán and Zaculeu, and by reports of other towns of which no visible trace remains.

Just outside Xelajú, now Quezaltenango, the Spaniards fought a great battle that resulted in slaughter of myriads of Indian warriors. The Río Samalá, a tranquil mountain stream, is said to have run red with blood, causing the horror-struck Indian survivors to name it the "River of Blood," a name it still bears. In that battle and in ensuing ones, perished the flower of Indian aristocracy. Thus today there are few descendants of the upper classes, who according to all testimony were a group much superior to the rude hunters and tillers of the fields.

The highland plains and valleys were densely populated in preconquest times and may well have had more inhabitants than now. Their people, although less advanced than those of the Valley of Mexico and Yucatán, had achieved a relatively high degree of culture. There is ground for belief that they lived under conditions little if at all inferior to those of rural Iberians of 1500 or perhaps even of 1946.

The Guatemalan Indians are among the most conservative peoples of the earth. After four centuries of exposure to Iberian culture they have changed their customs but little. Their clothing is different because of the introduction of sheep and imitation of early Spanish costumes. They have adjusted their pagan rites comfortably to the forms of Christian religion. Many of their dwellings scarcely are of aboriginal type but are copied from those of the Spaniards. They now have pigs and lard to improve their former food, although any meat they get from these or other imported animals is no important element of their diet. Otherwise the highland Indians subsist much as did their remote ancestors.

Their diet is probably no better and no worse. They eat little meat now since they have few domestic animals except sheep, whose chief product is not meat but wool. In preconquest days their only edible domestic animals were turkeys and perhaps a few ducks, and except in homes of the upper classes meat must have been a rarity. Wild animals

large enough for food are scarce in Guatemala now, and probably they never were much more plentiful after the land had been settled.

Guatemala has climates suitable for growth of any plant of the earth. Many exotic ones have been introduced since the Conquest, and in the markets of the larger cities are displayed most of the important fruits and vegetables of all tropical and temperate climes. The only vegetable I never have found there is the parsnip. There have been introduced other vegetable crops such as coffee and sugar, but these, produced in vast quantities in Guatemala, are little known to the highland Indians and used less.

Coffee and sugar are not grown in the highlands, and the Indians know them only as luxuries. As for Old World vegetables, I suspect the Indians simply do not care for them. They do cultivate them for the *ladino* markets of Guatemala and Quezaltenango, and make a good living by doing so. It would be hard to discover finer vegetables than those of the irrigated valleys of Almolonga and Zunil, near Quezaltenango, but those Indians are rather sophisticated, and long ago devised the best methods of cultivating them for the *ladino* trade.

Despite very liberal and successful introduction of fruits, vegetables, and cereals into Guatemala from abroad, highland people subsist upon the same vegetables and cereals, cooked in the same ways, as they did 500 years ago. The single important exception is the potato, brought probably soon after the Conquest from Peru or Chile, and now planted throughout Los Altos. It is grown at higher elevations than any other crop, unless it be maize.

What were the food plants of the early Guatemalans? There were only two really important ones, maize and beans, or *frijoles*. Maize in the form of tortillas and *frijoles* constitute practically the whole diet of the highland Indians, and anything else they may eat is mere lagnappe. This was the diet of their ancestors. The antiquity of maize and beans in Guatemala can be deduced from the great variation that both exhibit. Their varieties often are very local and carefully guarded, but not because they are believed superior to varieties grown by neighbors. The Indians cherish a firm belief that it is best to plant seeds grown on the premises. Otherwise the plants never would be happy; they would become homesick, as it were, pine away, and the crop would fail.

It is fortunate that maize and beans together form a moderately nutritious and balanced diet, for it is practically all that the Indians, or the *ladinos* for that matter, have to eat. One used to the fare of North America or continental Europe will find this diet heavy, difficult of digestion, and flavorless. Even the Indians find it so, and long ago they learned to flavor it with the native chile (*Capsicum*). Guatemalans, unlike Mexicans, seldom use chile to excess, but they use it enough and sometimes fortify it with a little imported garlic.

Another ancient vegetable used primarily for flavoring is the tomato, which may have been brought by the Spaniards from Peru. It does not

behave here as a native plant, never is found truly wild, and is attacked by many pests. It is said that if a Guatemalan cook goes into a kitchen and does not find tomatoes there, she walks out, refusing to start a meal. The highland Indians are less temperamental. An excellent substitute for tomato is the ground-cherry (*Physalis*), used not like a fruit as in the United States, but in cooking exactly like the tomato. Great quantities of *tomatillos* are traded in the markets, some of them as much as two inches in diameter and looking like small, green or yellow tomatoes.

An aboriginal vegetable of Central America is the pumpkin. It has no close wild relative in North America, although there are native wild species of *Cucurbita* that are inedible. It should be emphasized that the "foods" of the Guatemalan Indians were originally and still are maize and beans. Other edible plants, of scant nutriment, are merely *verduras* or "greens," which serve principally like the roughage fed to cattle, or as appetizers. Fruits, likewise, are not considered real food but are eaten because they taste good. The poorer people of Guatemala, and especially the Indians, seldom place fruits on the table but merely eat or "suck" them between meals.

As for pumpkins, most Guatemalan varieties have little resemblance to common pumpkins of the United States. Their long cultivation has established many well-marked forms, almost unlimited in number as one sees them in the markets, yet certain common varieties of other Central American countries, like the little *pipián* of Salvador, which is eaten only when very immature, are lacking in Guatemala.

Tomatoes and pumpkins were by no means the only secondary vegetables grown by the ancient Guatemalans, nor the only ones cultivated today by the Indians. An important one, known only in cultivation, is the chayote, the *güisquil* or *hüisquil* of Guatemala. Although the chayote is grown throughout southern Mexico and Central America, there seem to be many more varieties in Guatemala than elsewhere. They are large or small, green or white, spiny or unarmed. In the Department of Huehuetenango there are fantastic forms, large fruits so densely armed with long, flexible but still rather stiff spines that it is unpleasant to handle them. The chayote plant is almost unique because every part can be eaten except when old and tough. The fruits are an excellent vegetable that can be cooked in many ways. The tender immature seed or *lengua* is a delicacy pressed upon guests; the young shoots, inflorescences, and fresh leaves are a common *verdura*. The huge roots, which may be removed without killing the plant, are a good vegetable, and also are the basis of a tasty dessert that has a strange consistency almost like wood shavings.

One vegetable that is Guatemalan *par excellence* is the pacaya, the staminate inflorescence of a low slender palm of the genus *Chamaedorea*. Pacayas are not confined to Guatemala, as some ill-informed or disingenuous persons would have us believe, nor are they the product of a single species of *Chamaedorea*, even within Guatemala. Those of Guatemala are so much more abundant than those of other countries and so much better in

quality that Guatemala has some justification for claiming a monopoly of them. The finest are those grown about Cobán in Alta Verapaz, most of which are cultivated in regular plantations, and transported by truck-load to Guatemala and other cities. Their cultivation upon a small scale is probably ancient, the palms having been planted about dwellings because their natural home was in distant mountain forests, where it was not always easy to get them when wanted.

The pacaya is one of the most delicious of Central American vegetables. The plants are dioecious, and only the staminate spadices are eaten. With their enveloping spathes, these resemble roasting ears with their husks and sometimes are quite as large. When "husked" or opened, there is exposed an intricate mass that suggests a cluster of white worms. This part of the pacaya is dipped in egg and fried, or cooked in other ways. It may be boiled and seasoned with oil and vinegar, and eaten raw it makes a savory salad. Pacayas always have a slightly bitter flavor that is agreeable, and no matter how prepared for eating, they always are good.

Another vegetable that is planted, or at least never grows really wild, is the local *Yucca* or *izote*, *Yucca elephantipes*. This may have been brought to Guatemala from Mexico by the mercenaries hired by the Spanish conquerors, but it may have reached Central America earlier on the backs of the traders that wandered, as they do today, hundreds of miles north and south trading in products of different regions of Mexico and Central America. *Yucca* flowers are so liked that it is unusual to find one of the treelike plants with a full-blown inflorescence. While still in bud, the flowers are gathered, cooked, and eaten. They afford a good vegetable when dipped in egg and fried, and probably they would make a good salad. They are abundant and substantial enough to make a filling food.

The *chaya*, *Cnidioscolus aconitifolius*, is rather scarce in Guatemala and may be a recent introduction from Yucatán. It is a large shrub or small bushy-topped tree with an abundance of deep green, rather succulent foliage that is cooked and eaten. Introduced experimentally into southern Florida, it has been found that the leaves are particularly rich in certain vitamins; thus the *chaya* may enjoy a brief popularity among food faddists.

The Guatemalan vegetables brought under cultivation by the Indians presumably were those of greatest food value and easiest adaptation to cultivation, or ones that could not always be found wild when wanted. The aboriginal people, like their descendants, used as food a substantial number of plants that were edible, more or less agreeable in taste, but grew so generally about settlements that cultivation was unnecessary. These plants never have been "improved" like beans, pumpkins, and tomatoes, and they seem to vary little, no matter how varied their natural habitats. These esculent plants are rather numerous, but only a few can be noted here.

Purslane or pusley (*Portulaca oleracea*) sometimes is eaten as a pot herb in the United States, but in Guatemala its use is common and doubtless of great antiquity. Its good quality and abundance make it unneces-

sary to plant spinach in Central America. Another plant of the same family, *Calandrinia micrantha*, often is eaten like spinach. Much more popular are several native species of *Crotalaria*, known locally as *chipilin* (an Aztec name), whose young shoots, leaves, and flowers are cooked and eaten. They, like many edible wild plants, are sold in huge amounts in the Indian and *ladino* markets.

A favorite pot herb of the Guatemalan Indians is our common black nightshade, *Solanum nigrum*. Large quantities of the tender foliage with the flowers and young fruits are gathered and either consumed at home or sold in nearby markets. This plant, known in Guatemala as *yerba mora* or *mucuy*, is cooked like spinach, or used to fill tartlike *empanadas*, small turnovers filled with every conceivable mixture of greens, vegetables, meats, raisins, fruits, and other articles that it is best not to investigate too closely.

Blossoms of red-flowered Erythras are cooked like string beans and eaten, and made into a sort of fritter. The immature and still tender seed pods of *Gonolobus* are cooked and eaten as a vegetable. One of the favorite "greens" of Guatemala is the young shoots and flowers of *Fernaldia*, a genus of Apocynaceae, known in Guatemala and Salvador as *loroco*. Young sprouts of the Bromelias are much used as food, especially in arid parts of eastern Guatemala. One scarcely would expect that their usually stiff and spine-edged leaves could be eaten, but of course only the tenderest ones are gathered. It is hard to believe that even those can be a delectable vegetable. I have not had an opportunity to sample them.

A most unusual vegetable, fairly common, consists of the tender young flower heads of the Calatheas, which are dipped in egg or batter and fried or broiled. Equally strange are the young inflorescences of the aroid genus *Spathiphyllum*, which are treated in the same manner. The spadices in this genus look much like embryonic ears of corn. Some years ago, it is related, a North American, possibly a tourist, reported to the U. S. Department of Agriculture that in Guatemala he had been served soup of which miniature ears of corn were an ingredient. One may imagine the thrill with which this news was received, and the disgust of the men sent by the Department to investigate the matter. The credulity of scientists knows no bounds, and marvels still are expected from other continents besides Africa.

This year the world has heard a great deal about famine. In Guatemala famine is nothing new. When the maize crop fails, the result is catastrophic in a region where the diet at best is scant. In recent years the government has found temporary means of alleviating such disasters, but only a few years ago the highland Indians often suffered severely, and the results were quite as bad when clouds of locusts invaded the corn fields of the Pacific lowlands. In such cases the people had to resort to any vegetable matter that would sustain life. One of the plants used at such times was one or more wild species of *Dioscorea*, called *madre de maiz*, whose large hard roots were made into a kind of tortilla or tamal. Even

more use was made of the large seeds of *Brosimum*, which were boiled, ground, and made into coarse tortillas. Only a few years ago a scientist of the U. S. Department of Agriculture soberly suggested in print the planting of a large part of the Florida Peninsula with forests of *Brosimum Alicastrum*. Whether the trees would grow there is dubious, but if they did, one suspects that the good people of Florida, for whose welfare so much solicitude was expressed, would care less for cakes of *Brosimum* seeds than for fried chicken, ice cream, or even grits. It is only when starving that Guatemalan Indians condescend to eat them.

The leaves of *Eryngium foetidum* and *Chenopodium ambrosioides*, both plants of incomparably vile odor, give a pleasing or even delicious flavor to soups and meat stews. It must have been in time of famine that the Indians discovered the comestible value of plants so unpromising.

These are only a few random notes on edible plants of Guatemala, presented in no orderly fashion. One plant not yet mentioned, but one for which Guatemala is famous, is the avocado. No region of the earth produces better avocados; few regions ones of comparable quality. Their food value is high because of the large amount of oil in the flesh, and the mountain Indians enjoy eating their hard-skinned avocados for both their food value and their delicious flavor.

Although from a botanical standpoint indubitably a fruit, the avocado is regarded by Guatemalans as something else, as is the tomato in the United States. At a hotel table in the town of Jutiapa one day, some regular patrons who formed a sort of lunch club demanded the usual "fruit" that should accompany the noonday meal. The French housekeeper explained tactfully that fruit was scarce in the market now, in the middle of the dry season; however she *could* give them some avocados. Uproarious shouts greeted this hopeful offer. For the rest of the meal every new guest to enter the dining room was greeted with the story, which ended: "Figúrese! We asked Madame for fruit, and she offered us *avocados!*"